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ONLINE DATABASE : WPI

(54) Control of individual functional units of a printing press

(57) Apparatus for the control of individual functional units (2 - 4) of a printing press (1) consists of a hand-held portable operating device and a coding apparatus. The transportable operating device is divided into a multiplicity of surface areas, and can be mechanically or magnetically parked at the parking position (5) of any one of the units (2 - 4). Depending on the selected parking position, the surface areas are visually associated with the respective functions of the unit through the intermediary of the coding apparatus.

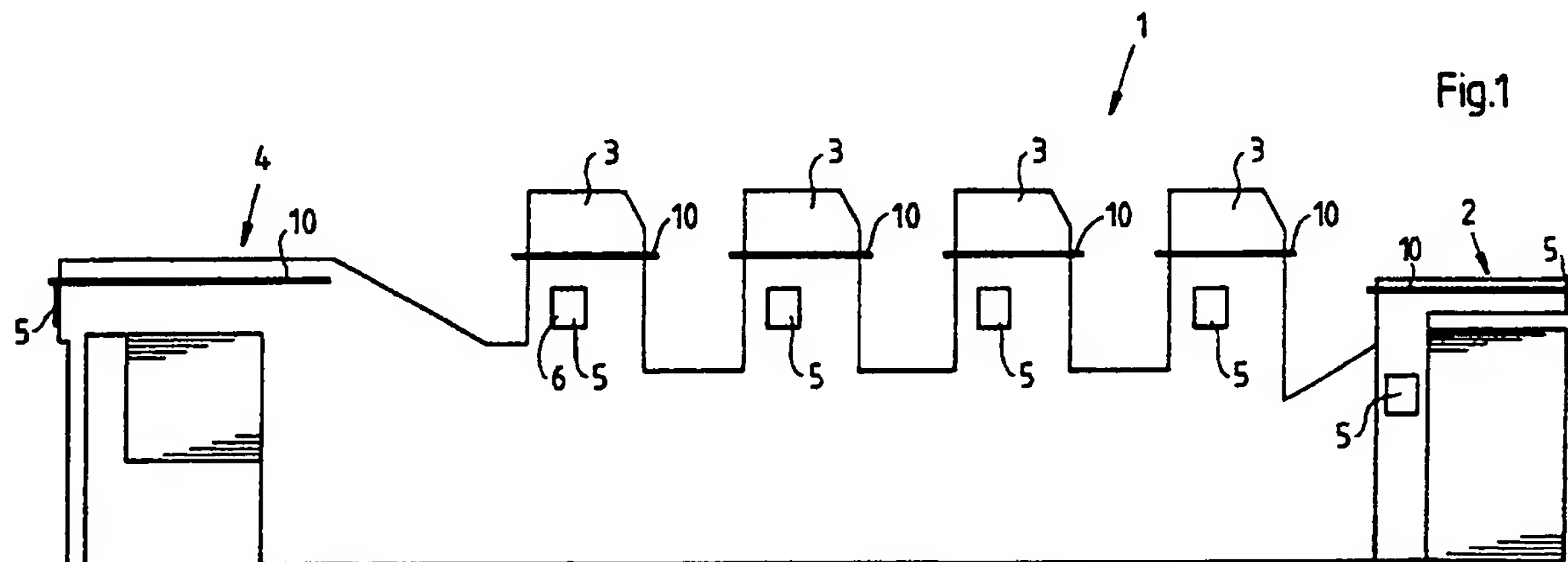
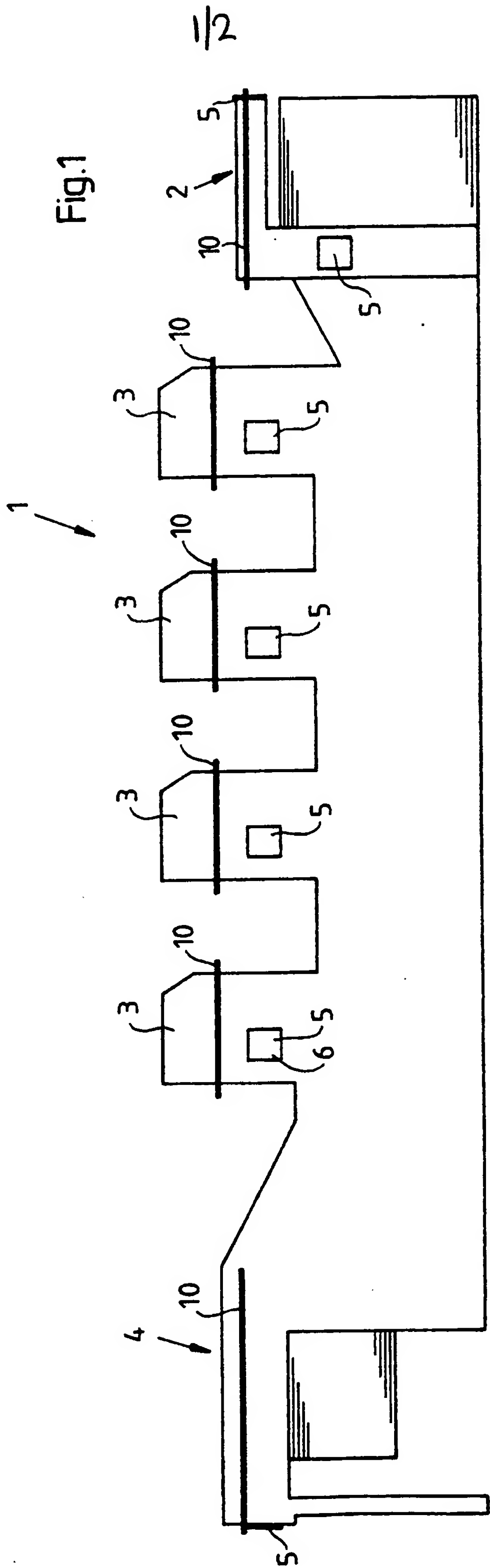


Fig.1

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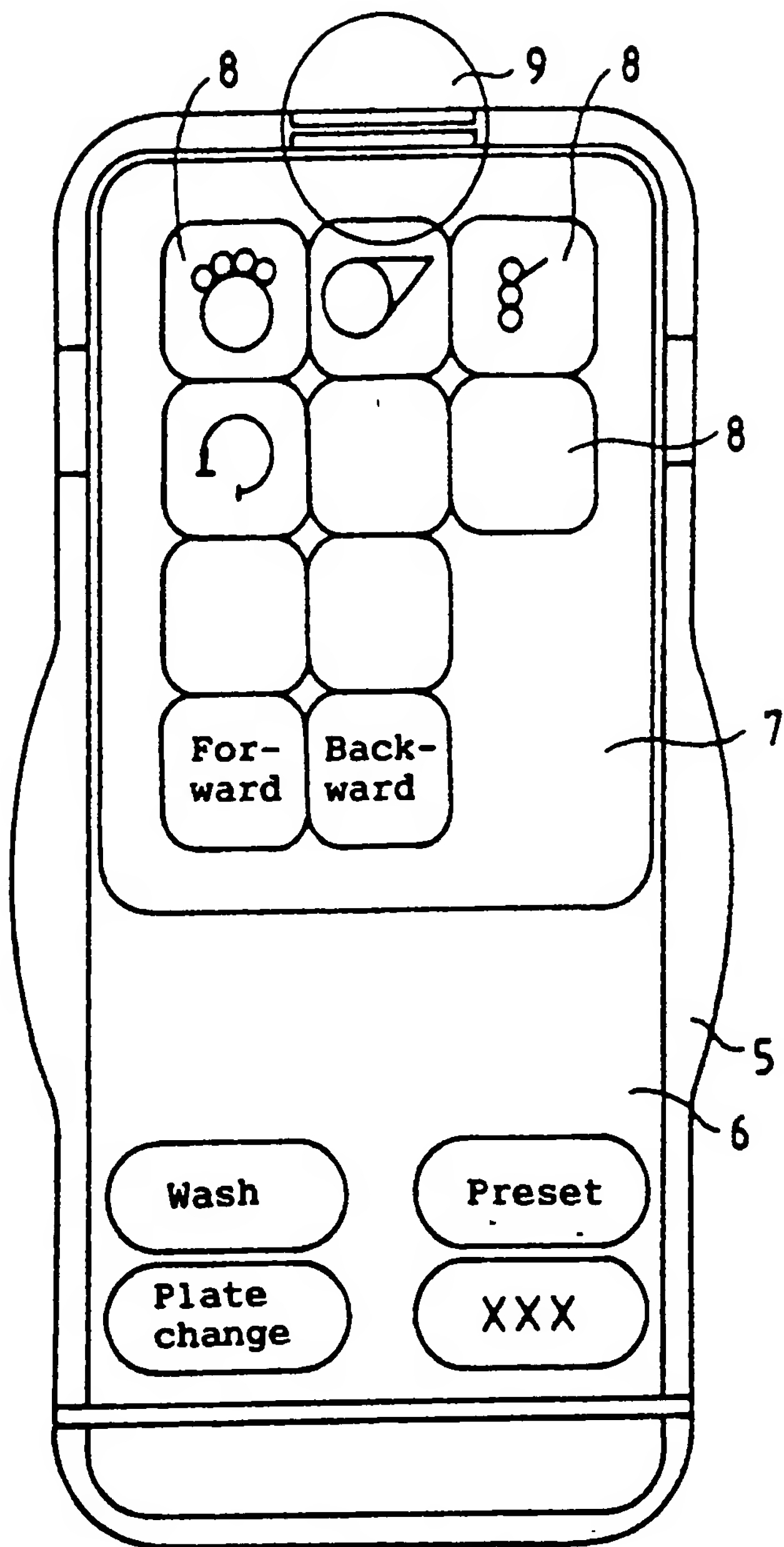


Fig. 2

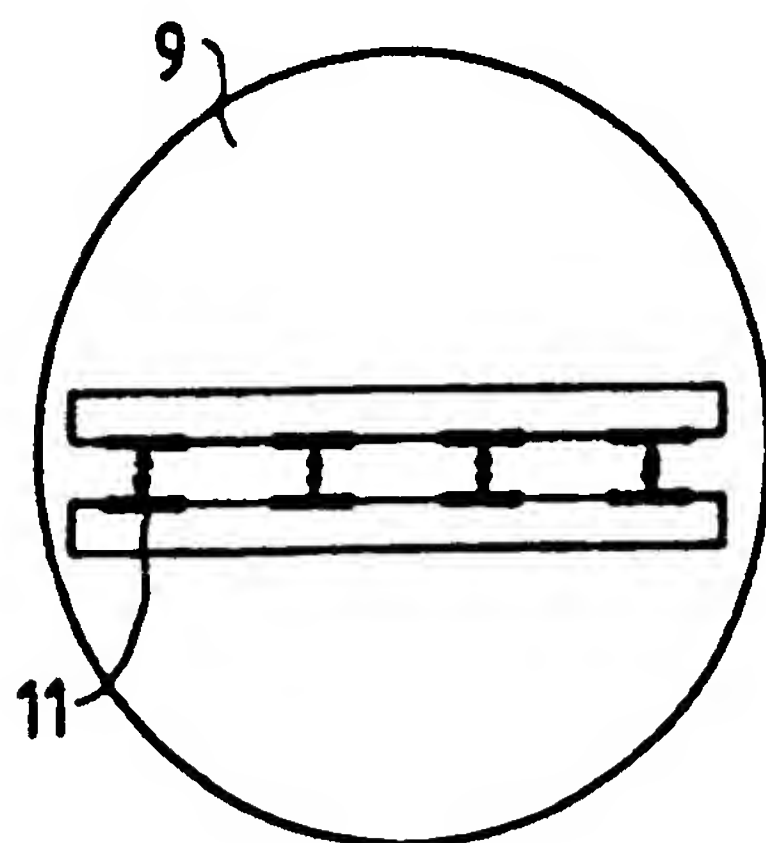


Fig. 3

Apparatus for the control of individual functional units
of a printing press

The invention relates to an apparatus for the control of individual functional units of a printing press.

EP 02 43 661 B1 describes a control apparatus which is disposed separately from the printing press. In particular, the control apparatus consists of an overall electronic system, which is accommodated in a switch cabinet, and of a control desk. The presetting, after-setting and monitoring of the printing press are effected from said control desk. Through the pressing of corresponding function keys, the instantaneous settings of the corresponding functional elements of the printing press are displayed on the screen of the control desk. This allows the operating personnel centrally to monitor the functions of the printing press and to make any necessary changes.

DE 36 14 744 A1 describes an apparatus for the control of rotary printing presses, with the control commands being supplied wirelessly by means of an operating element with transmitter to an electric printing-press control through the intermediary of a receiver and decoder. Either electromagnetic waves, infrared radiation, light beams of other wavelengths or ultrasonic waves are used for signal transmission.

In addition to said central control apparatus, individual functional units of the printing press are provided with further operating stations. Said operating stations are, for example, the operating station on the delivery, the operating station on the feeder, the operating station on the operator side of

the printing unit, the operating station on the drive side of the printing unit, the operating station on the damping unit or the operating station on the feeder-pile control. Each of said operating stations has a multiplicity of function keys.

The object of the present invention is to propose an apparatus for the control of functional units of a printing press, said apparatus minimizing the costs of the operating stations on the printing press.

The object of the invention is achieved in that a portable operating device is provided, said operating device being attached at provided parking positions of the corresponding functional unit, in that the portable operating device is divided into a multiplicity of surface areas and in that a coding unit is provided, said coding unit, depending on the selected parking position, visually associating the surface areas of the portable operating device with the corresponding functions.

According to an advantageous further development of the apparatus according to the invention, it is proposed that the coding unit is a mechanical coding unit. Alternatively, it is provided that the coding unit is an electrical coding unit.

In an advantageous embodiment of the apparatus according to the invention, it is provided that either the surface areas consist directly of keys or the surface areas are associated with keys, with the current key assignment being visually indicated according to the current parking position. The visual indication may, for example, be effected in that the correspondingly assigned keys illuminate.

A particularly advantageous further development of the device according to the invention provides that the portable operating device comprises a touch screen. Once again, the assignment of the surface areas for the respective parking position is visually indicated, for example by the illumination of the corresponding areas. As already described in the introduction, the functional units may be the printing units, the feeder or the delivery of the printing press. In web-fed rotary printing presses, additional parking positions may also be provided on the printing-press units that further process the paper web.

Thanks to the apparatus according to invention, the multiplicity of operating stations is replaced by one or, in the case of two operators, by two portable operating station(s). This makes it possible considerably to reduce the costs of the operating stations.

Normally, one person will operate the individual functional units of the printing press. Plate-changing or rubber-blanket cleaning may be cited as examples of the operations to be performed on the printing press. In order, nevertheless, to prevent accidents on the printing press, the printing press must be able to be stopped from any point on the printing press. For this purpose, it is provided according to an advantageous further development of the device according to the invention that an emergency-stop rail is provided in the regions of the individual functional units. In particular, said emergency-stop rail is situated in the region of the side walls of the printing units, of the feeder and of the delivery.

Particularly advantageous is the embodiment wherein the parking positions for the portable operating device are in the form of recesses in the walls of the individual functional units. For example, the recesses may be of such depth that the top side of the portable operating device finishes flush with the side wall of the corresponding functional unit.

An advantageous further development of the apparatus according to the invention provides that the portable operating station is connected to the corresponding parking position through the intermediary of mechanical or magnetic fasteners.

The invention is described in greater detail with reference to the following drawings, in which:

- Fig. 1 shows a schematic representation of the side view of a printing press with the apparatus according to the invention;
- Fig. 2 shows an embodiment of the apparatus according to the invention ; and
- Fig. 3 shows an embodiment of the coding unit for control of the apparatus according to the invention.

Fig. 1 shows a schematic representation of the side view of a printing press 1 with the apparatus 6 according to the invention. The printing press 1 consists of a feeder 2, four printing units 3 and a delivery 4. The feeder 2, the printing units 3 and the delivery 4 are provided with parking positions 5 for the portable operating device 6 according to the invention. Depending on the desired functional unit 2, 3, 4, the portable operating device 6 is attached to the

corresponding parking position 5 through the intermediary of a magnetic or mechanical contact.

An emergency-stop rail 10 is attached in the region of the side walls of the printing units 3 and in the side regions of the feeder 2 and of the delivery 4. Said emergency-stop rail 10 replaces the conventional emergency-stop switch provided on the individual operating stations, said emergency-stop switch, when pressed, immediately stopping the printing press 1. The emergency-stop rail 10 ensures that any person working on the printing press 1 is able to stop the printing press 1 from any desired functional unit 2, 3, 4.

Fig. 2 shows an embodiment of the portable operating device 6. Said portable operating device 6 is attached to a parking position 5 through the intermediary of magnets or corresponding mechanical connectors, which are not shown in the drawing. Said parking position 5 is, for example, a recess in the side walls of a printing unit 2. The recess is of such design that the portable operating device 6 can easily be introduced into and removed from the parking position 5.

The portable operating device 6 consists of a touch screen 7. Through the intermediary of the coding unit 9, the functions required for the corresponding parking position 5 are displayed in individual surface areas 8 on the touch screen 7. For example, the cylinders of a printing unit 3 can be moved forwards or backwards at crawl speed through the intermediary of the surface areas 8.

Fig. 3 shows an embodiment of the coding unit 9. The information on the associated functional unit 2, 3, 4 is forwarded via various inputs 11 to the touch screen 7.

The required surface areas 8 are activated according to said association; that is, in the present case, the surface areas 8 show graphic representations of known functions of the corresponding functional unit.

It will of course be understood that the present invention has been described above purely by way of example, and modifications of detail can be made within the scope of the invention.

CLAIMS:

1. A portable operating device for the control of individual functional units of a printing press, said operating device being adapted to be attached at a parking position on a corresponding functional unit, wherein the portable operating device is divided into a multiplicity of surface areas, and wherein a coding unit is provided, which, depending on the selected parking position in use, visually associates the surface areas of the portable operating device with the corresponding functions of the functional unit.
2. Device according to claim 1, wherein the coding unit is a mechanical coding unit.
3. Device according to claim 1, wherein the coding unit is an electrical coding unit.
4. Device according to claim 1, 2 or 3, wherein the surface areas are keys or the surface areas are associated with keys, the assignment of said keys being visually indicated for the corresponding parking position.
5. Device according to any one of claims 1-4, and further comprising a touch screen, with the assignment of the surface areas of the touch screen being visually indicated according to the parking position.
6. A portable operating device, substantially as hereinbefore described with reference to the accompanying drawings.
7. A printing press provided with apparatus for controlling individual function units of the press, said apparatus including a portable device as claimed in any one of claims 1-6, and wherein the functional unit of the printing press is a printing unit, a feeder or a delivery.

8. A printing press according to claim 7, wherein an emergency-stop rail is attached to each functional unit of the printing press.

5 9. A printing press according to claim 7 or 8, wherein parking positions in the form of recesses are provided in the walls of the functional units.

10 10. A printing press according to claim 7, 8 or 9, wherein the portable operating device is connected to the parking position through the intermediary of a mechanical or magnetic fastener.

15 11. A printing press, substantially as hereinbefore described with reference to the accompanying drawings.

- 9 -

Relevant Technical Fields

(i) UK Cl (Ed.M) B6C: CVT

(ii) Int Cl (Ed.5) B41F: 33/00, 33/02

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE DATABASE: WPI

Search Examiner
A DAVEY

Date of completion of Search
20 APRIL 1994

Documents considered relevant
following a search in respect of
Claims :-
1-11

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages	Relevant to claim(s)
A	US 4812842 (KOENIG & BAUER) whole document	

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).